

The impact of ChatGPT on higher education

Year: 2023 | Citations: 333 | Authors: Juan M. Dempere, K. Modugu, Allam Hesham, Lakshmana Kumar Ramasamy

Abstract

This study explores the effects of Artificial Intelligence (AI) chatbots, with a particular focus on OpenAI's ChatGPT, on Higher Education Institutions (HEIs). With the rapid advancement of AI, understanding its implications in the educational sector becomes paramount. Utilizing databases like PubMed, IEEE Xplore, and Google Scholar, we systematically searched for literature on AI chatbots' impact on HEIs. Our criteria prioritized peer-reviewed articles, prominent media outlets, and English publications, excluding tangential AI chatbot mentions. After selection, data extraction focused on authors, study design, and primary findings. The analysis combined descriptive and thematic approaches, emphasizing patterns and applications of AI chatbots in HEIs. The literature review revealed diverse perspectives on ChatGPT's potential in education. Notable benefits include research support, automated grading, and enhanced human-computer interaction. However, concerns such as online testing security, plagiarism, and broader societal and economic impacts like job displacement, the digital literacy gap, and AI-induced anxiety were identified. The study also underscored the transformative architecture of ChatGPT and its versatile applications in the educational sector. Furthermore, potential advantages like streamlined enrollment, improved student services, teaching enhancements, research aid, and increased student retention were highlighted. Conversely, risks such as privacy breaches, misuse, bias, misinformation, decreased human interaction, and accessibility issues were identified. While AI's global expansion is undeniable, there is a pressing need for balanced regulation in its application within HEIs. Faculty members are encouraged to utilize AI tools like ChatGPT proactively and ethically to mitigate risks, especially academic fraud. Despite the study's limitations, including an incomplete representation of AI's overall effect on education and the absence of concrete integration guidelines, it is evident that AI technologies like ChatGPT present both significant benefits and risks. The study advocates for a thoughtful and responsible integration of such technologies within HEIs.